REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 20-26, 28-39, and 41-43 are currently pending in this application. Claims 20, 32, and 43 are independent. The remaining claims depend, directly or indirectly, from claims 20 and 32.

Claim Amendments

Claims 20 and 32 have been amended to recite that the working buffer is reserved for incoming subtitle data, resulting in the contents of the working buffer constantly changing as incoming data is received. Further, the amended claims recite that the interchanging of roles between the working buffer and the display buffer transfers the complete image from the working buffer to the display buffer. Applicant asserts that no new matter has been added by the aforementioned amendments. Support for these amendments may be found, for example, on page 16 line 26 – page 18 line 20, and in Figure 5.

Rejection under 35 U.S.C. § 103

Claims 20-26, 28-39, and 41-43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over EP0802519 ("Chee") in view of US Patent No. 5,781,687 ("Parks"). To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

The present invention relates to a method of processing video data in a receiver/decoder. In particular, the present invention overcomes the problem of conflict between subtitle data and

graphics data when both types of data are processed in the same processing layer (*i.e.,* the graphics layer buffer region of Figure 5) (*see* Specification, page 16). To avoid conflict between graphics data and subtitle data, the present invention designates a working buffer and a display buffer (two distinct buffer sub-areas within the graphics layer buffer region), where the working buffer is reserved for incoming subtitle data. That is, the working buffer constantly receives incoming subtitle data from a video data stream, which results in the contents of the working buffer constantly changing. Further, a third buffer sub-area is designed for graphics data. Just before the roles of the display buffer and working buffer are ready to be interchanged, the graphics data is copied into the working buffer, and the *complete image*, which is the combination of the complete subtitle page and the graphics data, is effectively *transferred from the working buffer to the display buffer* as a result of the interchanging of roles between the working buffer and the display buffer.

By separating the graphics data and the subtitle data in distinct buffer sub-areas until the complete image is ready to be displayed, conflict between the subtitle data and graphics data is avoided. Using the present invention, overlapping portions of subtitle data and graphics data can be displayed with the graphics data on top of the complete subtitle page, while non-overlapping portions of the two types of data can be displayed concurrently. Thus, the display buffer, the working buffer, and the third buffer sub-area are *not* overlapping memory areas; rather, they are distinct, separate regions of memory that are all located within one layer, *i.e.,* the graphics layer buffer region (*see* Specification, Figure 5).

Turning to the rejection of the claims, Chee fails to teach or suggest the following:

(i)   As admitted by the Examiner on page 5 of the Office Action mailed June 29, 2006, Chee fails to teach or suggest storing subtitle data in the working buffer. It also follows, that

Chee fails to teach or suggest that the working buffer is reserved for incoming subtitle data. Further, because Chee does not even mention subtitle data including at least one subtitle, Chee cannot possibly disclose forming a complete subtitle page as incoming subtitle data is stored in the working buffer.

(ii) Chee fails to teach or suggest that the interchanging of roles between the working buffer and the display buffer results in the transfer of the complete image, which *includes the complete subtitle page and the graphics data* that is copied into the working buffer before the roles of the working buffer and the display buffer are interchanged, from the working buffer to the display buffer. In fact, the Examiner cites the double-buffering technique disclosed in Chee as disclosing the interchanging of roles between the working buffer and the display buffer recited in the amended independent claims. However, the double-buffering technique of Chee only discloses that an application draws in a first area of memory while a second area of memory acts as a display. When the application completes the drawing process in the first area of memory, the two memory locations are swapped. However, the swapping of these two memory location can, *at most*, result in the drawings made by the application being transferred from one area of memory to a memory area for display. This is clearly not equivalent to the transfer of a complete image, including a complete subtitle page, being transferred from a working buffer to a display buffer. Because the "drawings" made by the application in Chee do not include subtitle data and do not form a complete subtitle page, it is not at all possible for the double-buffering technique disclosed in Chee to be equivalent to the completed image of the present invention, as recited in the amended independent claims 20 and 32.

8

(iii)   Chee also fails to teach or suggest three distinct buffer sub-areas within the same single graphics buffer region, as required by the amended independent claims of the present invention. The Examiner clearly states on page 2 of the Office Action mailed June 29, 2006, that the two memory areas recited in the discussion of the double buffering technique on page 12 of Chee are equivalent to the 1st and 2nd buffer sub-areas recited in the amended independent claims of the present invention. Further, the Examiner states that buffer region 1960 in Figure 20 of Chee is equivalent to the 3rd buffer sub-area recited in the amended independent claims of the present invention. However, the three aforementioned memory areas of Chee are not located in the same graphics buffer region. As shown clearly in Figure 5 of the present invention, the three buffer sub-areas recited in the amended independent claims (*i.e.,* buffer sub-areas $45A^0$, $45A^1$, and $45A^i$), are all located in graphics layer buffer area (45). In contrast, Chee fails to disclose or suggest where the two memory areas used in the double buffering technique are located. Thus, although memory 1960 disclosed in Chee is a graphics buffer area, the other two buffer areas that the Examiner relies on in Chee are *not* within the graphics region (1960) of Chee (*see* Chee, Figures 19-20).

Thus, it is clear that Chee fails to disclose or suggest several limitation of the claimed invention. Further, Parks fails to supply that which Chee lacks. Parks discloses using a script to operate a graphics overlay card for purposes of editing video content (*see* Parks, Abstract). The cited portion of Parks discloses that text of subtitles is stored at an assigned location (a buffer) of a computer and is transferred one character at a time to a cleared page (*see* Parks, col. 5, ll. 17-22). Parks fails to teach or suggest interchanging roles between a working buffer and a display buffer such that a complete image, including a complete subtitle page and graphics data, is

transferred from the working buffer to the display buffer. Further, Parks fails to disclose or suggest three distinct buffer sub-areas within a graphics buffer region.
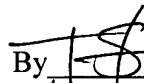
In view of the above, it is clear that amended independent claim 20 and 32 are patentable over Chee and Parks, whether considered separately or in combination. Independent claim 43 includes the subject matter of amended independent claim 32 and is patentable over Chee and Parks for at least the same reasons. Further, dependent claims are patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 11345/027001).

Dated: September 13, 2006   Respectfully submitted,

By _____ #45,079

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